



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,246	06/26/2003	Roger Laverne Johnson	SAIC0025-CON1	8282

75131 7590 06/27/2008

KING & SPALDING LLP (SAIC CUSTOMER NUMBER)

ATTN: GEORGE T. MARCOU

1700 PENNSYLVANIA AVE, NW

SUITE 200

WASHINGTON, DC 20006

EXAMINER

SANTIAGO, MARICELI

ART UNIT

PAPER NUMBER

2879

MAIL DATE

DELIVERY MODE

06/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/606,246

Applicant(s)

JOHNSON ET AL.

Examiner

Mariceli Santiago

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-40, 42-54 and 56-61 is/are rejected.
- 7) ☒ Claim(s) 41 and 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/22/2008.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Receipt of the Amendment, filed on March 14, 2008, is acknowledged.

Cancellation of claims 1-30 has been entered.

Claims 1-61 are pending in the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-37 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumbard et al. (US 4,890,383).

Regarding claim 31, Lumbard discloses a method for testing a light-emitting panel during a process of manufacturing the light-emitting panel, comprising: selecting at least one point within the manufacturing process of the light-emitting panel for testing (Column 4, lines 35-37), the one point within the manufacturing process resulting in a portion of the light-emitting panel (wire 17), obtaining the portion of the light-emitting panel, testing the portion of the light-emitting panel (Column 4, lines 35-40), and determining if the portion of the light-emitting panel is produced within acceptable tolerances (Column 4, lines 35-40).

Lumbard fails to exemplify the limitation of the light emitting panel includes a plurality of micro-components containing ionizable gas, instead Lumbard performs the disclosed method of testing the electric characteristics on solid state light emitting devices micro-components.

Lumbard acknowledges the advantages of testing the electrical characteristics of the light

Art Unit: 2879

emissive component at intermediate periods of manufacture in order to reduce the quantity of electrical defects in the final product. One skilled in the art would reasonable contemplate as an obvious matter of design engineering, to apply a similar testing approach during manufacture of a variety of light emitting devices, inclusive gas discharge, field emission or solid state devices, in order to detect electrical defects of the components during intermediate manufacturing processes before final assembly of the devices, since the disclosed techniques would have been recognized as part of the ordinary capabilities of one skilled in the art. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the method of Lumbard for the testing of gas discharge micro-components as an obvious matter of design engineering in order to detect electrical defects of the components during intermediate manufacturing processes before final assembly of the devices, since the disclosed techniques would have been recognized as part of the ordinary capabilities of one skilled in the art.

Regarding claim 32, Lumbard discloses a method wherein the manufacturing process comprises manufacturing a plurality of light-emitting panels and the selecting at least one point comprises selecting the portion of the light-emitting panel for testing from among a plurality of portions of light-emitting panels (Fig. 7, Column 4, lines 35-40).

Regarding claim 33, Lumbard discloses a method wherein selecting the portion of the light- emitting panel comprises monitoring a series of portions of light-emitting panels being manufactured (wires 17), and selecting at a regular interval a set of portions of light-emitting panels for testing from the series of portions of light-emitting panels (Column 4, lines 35-40).

Regarding claim 34, Lumbard fails to exemplify the limitation of varying the regular interval at which the portions of the light-emitting panels are selected for testing. Lumbard teaches testing each of the light emitting panels. It is considered within the capabilities of one

Art Unit: 2879

skilled in the art to perform the testing of the light emitting devices at a varying regular interval as an obvious matter of design engineering. Moreover, such modification does not appear to solve any of the stated problems or yield any unexpected results that are not within the scope of the teachings applied. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to modify the method of Lumbard to incorporate varying the regular interval at which the portions of the light-emitting panels are selected for testing because such modification would have been considered a mere design consideration which fails to patentably distinguish over the teachings of Lumbard.

Regarding claim 35, Lumbard discloses a method wherein selecting the set comprises selecting each portion (wires 17) of the light-emitting panel for testing.

Regarding claim 36, Lumbard discloses a method wherein the manufacturing process comprises a plurality of manufacturing steps and wherein selecting at least one point comprises selecting each time in the manufacturing process that one of the manufacturing steps is completed (Column 4, lines 35-40).

Regarding claim 37, Lumbard discloses a method wherein testing the portion of the light-emitting panel comprises obtaining a measurement of at least one characteristic of the portion of the light-emitting panel and determining comprises determining if the measurement falls within a range of acceptable values (Column 4, lines 35-40).

Regarding claim 42, Lumbard discloses a method wherein the manufacturing process is a web manufacturing process and the selecting comprises selecting the portion of the light-emitting panel during the web manufacturing process.

Claim 31, 36-37, 39, 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaudaine et al. (US 5,482,486)

Art Unit: 2879

Regarding claim 31, Vaudaine discloses a method for testing a light-emitting panel during a process of manufacturing the light-emitting panel, comprising selecting at least one point within the manufacturing process of the light-emitting panel for testing (manufacture of the microtip element, Column 3, lines 31-32), the one point within the manufacturing process resulting in a portion of the light-emitting panel (microtip component), obtaining the portion of the light-emitting panel, testing the portion of the light-emitting panel (Column 3, lines 44-46), and determining if the portion of the light-emitting panel is produced within acceptable tolerances (Column 3, lines 48-67).

Vaudaine fails to exemplify the limitation of the light emitting panel includes a plurality of micro-components containing ionizable gas, instead Vaudaine performs the disclosed method of testing the emission characteristics on field emission micro-components. Vaudaine acknowledges the advantages of testing the electrical characteristics of the light emissive component at intermediate periods of manufacture in order to reduce the amount of emission defects in the final product. One skilled in the art would reasonable contemplate as an obvious matter of design engineering, to apply a similar testing approach during manufacture of a variety of light emitting devices, inclusive gas discharge, field emission or solid state devices, in order to detect emission defects of the components during intermediate manufacturing processes before final assembly of the devices, since the disclosed techniques would have been recognized as part of the ordinary capabilities of one skilled in the art. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the method of Vaudaine for the testing of gas discharge micro-components as an obvious matter of design engineering in order to detect electrical defects of the components during intermediate manufacturing processes before final assembly of the devices, since the

Art Unit: 2879

disclosed techniques would have been recognized as part of the ordinary capabilities of one skilled in the art.

Regarding claim 36, Vaudaine discloses a method wherein the manufacturing process comprises a plurality of manufacturing steps and wherein selecting at least one point comprises selecting each time in the manufacturing process that one of the manufacturing steps is completed (Column 3, lines 41-62).

Regarding claim 37, Vaudaine discloses a method wherein testing the portion of the light-emitting panel comprises obtaining a measurement of at least one characteristic of the portion of the light-emitting panel and determining comprises determining if the measurement falls within a range of acceptable values (Column 3, lines 41-62).

Regarding claim 39, Vaudaine discloses a method further comprising adjusting the manufacturing process step when that the portion of the light-emitting panel is not within acceptable tolerances (Column 3, lines 48-67).

Regarding claim 40, Vaudaine discloses a method wherein the adjusting of the manufacturing process is performed automatically upon a determination that the portion of the light-emitting panel is not within acceptable tolerances (Column 3, lines 48-67).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaudaine et al. (US 5,482,486) in view of Li (US 5,862,054).

Regarding claim 38, Vaudaine is silent in regards to the limitations of during the manufacturing a plurality of light-emitting panels, selecting comprises selecting a plurality of portions of light-emitting panels for testing, and obtaining comprises obtaining measurements on the plurality of portions of light-emitting panels; the method further comprising, storing the measurements to produce a plurality of stored results; analyzing the plurality of stored results

Art Unit: 2879

for patterns of consistent non-conformity, and adjusting the manufacturing process based on the patterns of consistent non-conformity to increase a number of the portions of light-emitting panels that have measurements falling within the range of acceptable values. However, Li discloses a method to monitor process parameters from multiple process machines to provide real time statistical process control, the process incorporating testing of the product, and determining if the product is produced within acceptable tolerances (Column 4, lines 1-18), wherein the product is manufactured in batches and the testing is performed to each batch, in order to maintain a high yield through a high level of process control. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the process control disclosed by Li in the method of Vaudaine in order to maintain a high yield through a high level of process control.

Claims 43-54 and 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (US 4,563,617) in view of Li (US 5,862,054).

Regarding claims 43-54 and 56-61, Davidson discloses a method for manufacturing a light-emitting panel, comprising: providing a first substrate (4), forming a cavity on the first substrate, obtaining a micro-component (1), placing the micro-component in the cavity, providing a second substrate (5) opposed to the first substrate, and aligning the second substrate to the first substrate, such that the micro-component is disposed between the first and second substrates, placing at least two electrodes (2, 3) on at least one of the first or second substrates for producing a voltage across the micro-component, the at least two electrodes formed from conductive patterns, placing an enhancement material (11) on at least one of the first and second substrates, completing the manufacturing of the light-emitting panel. Davidson fails to exemplify the limitation of having a portion of the light-emitting panel being manufactured

Art Unit: 2879

prior to the completing of the light-emitting panel, testing the portion of the light-emitting panel, and determining if the portion of the light-emitting panel is produced within acceptable tolerances. However, Li discloses a method to monitor process parameters from multiple process machines to provide real time statistical process control, the process incorporating testing of the product, and determining if the product is produced within acceptable tolerances (Column 4, lines 1-18) in order to maintain a high yield through a high level of process control. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the process control disclosed by Li in the method of Davidson in order to maintain a high yield through a high level of process control.

In regards to claims 44-54 and 56-61, the claims are directed to performing the testing after particular manufacturing process and/or testing different portion of the device. It is considered within the capabilities of one skilled in the art to select the stage at which the control process is performed as an obvious matter of design engineering since Li further acknowledges collecting parameter data for different processes. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to modify the combined references to Davidson-Li in order to incorporate testing of the device after a particular manufacturing process because such modification would have been considered a mere design consideration which fails to patentably distinguish over the teachings of Davidson-Li.

Allowable Subject Matter

Claims 41 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 31-40, 42-54 and 56-61 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Mariceli Santiago/

Primary Examiner, Art Unit 2879